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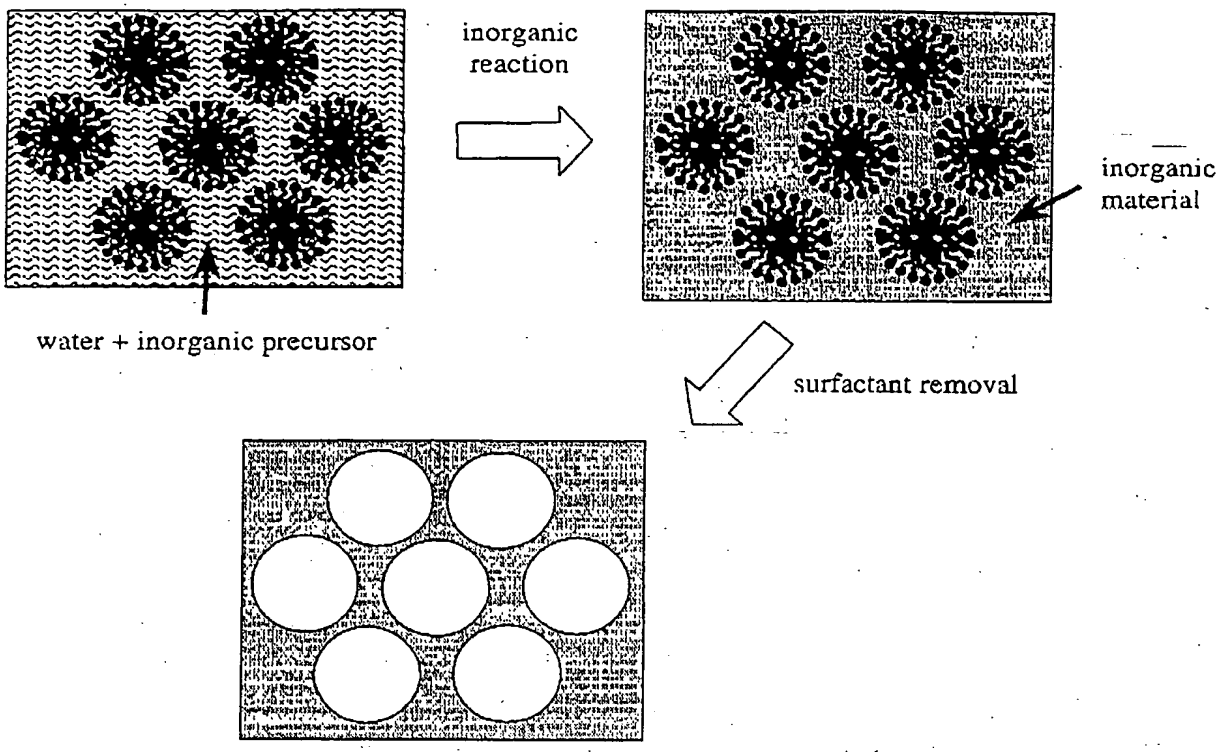
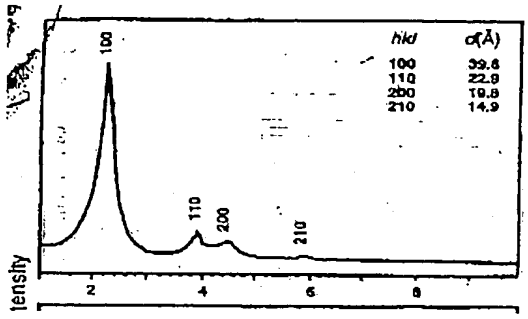
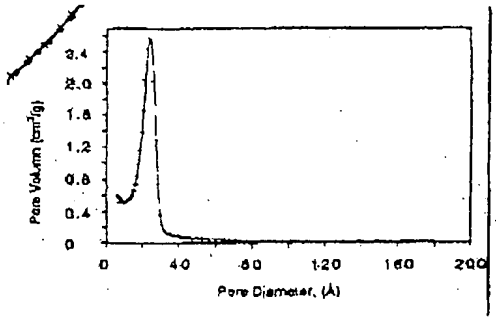

inorganic
reaction
inorganic
material
water + inorganic precursor
surfactant removal

Figure 1



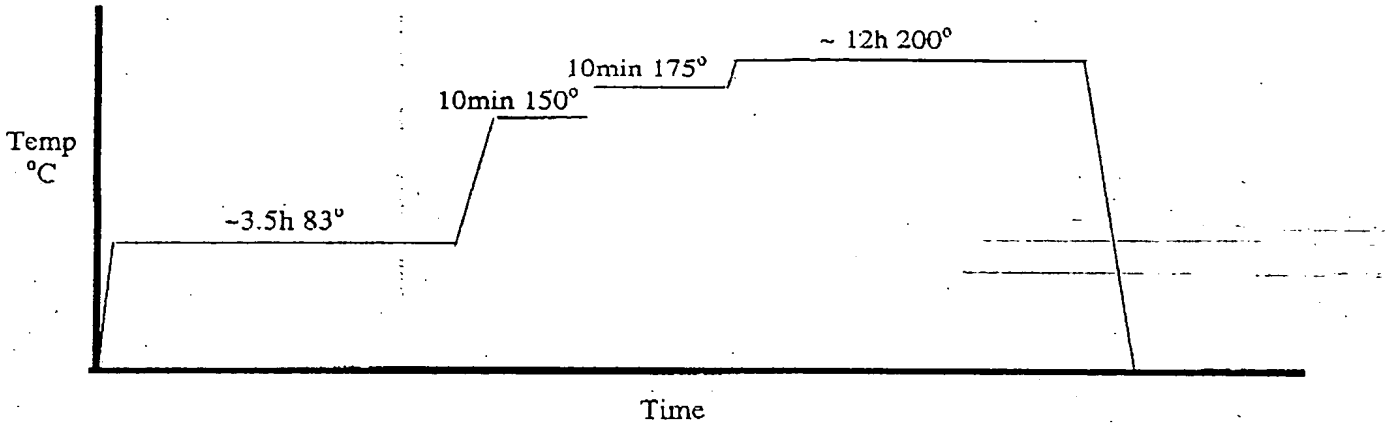
Typical XRD pattern from a surfactant-templated material .

Figure 2



Typical pore size distribution from a surfactant-templated material.

Figure 3



In Example 1- Production of CeO2. Temperature history.

Figure 4

Figure 5

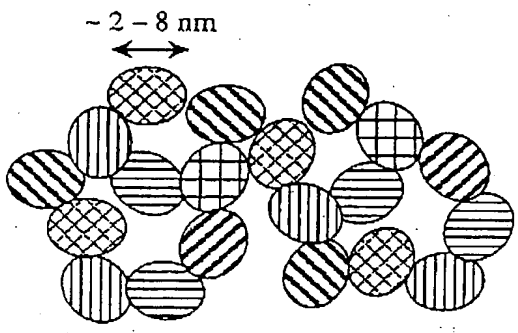


Figure 6

XRD traces from CeO_2, Ce0.6Sm0.4Ox, Ce0.65Sm0.2Cu0.15Ox, Ce0.6Zr0.2Sm0.1Cu0.1Ox

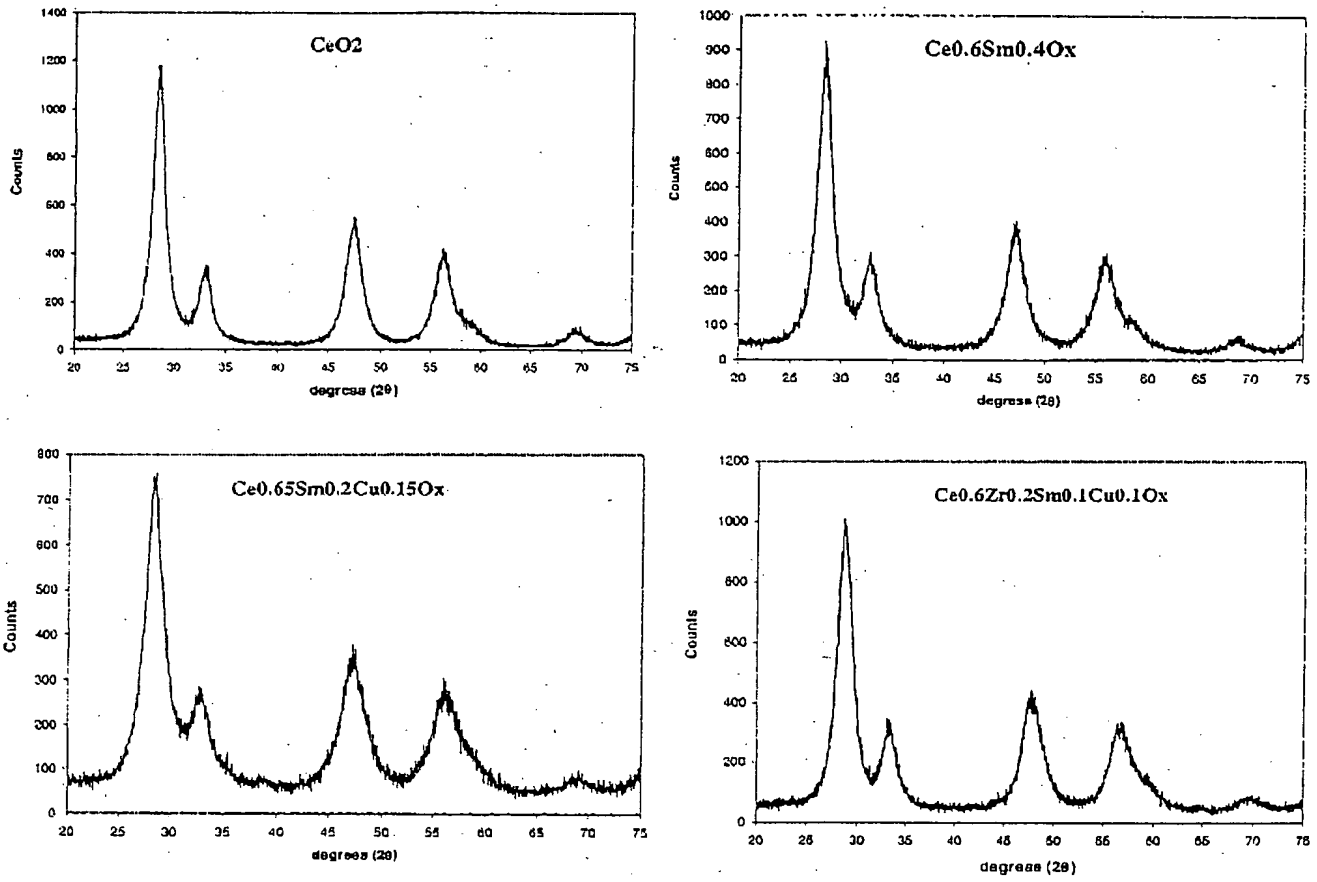
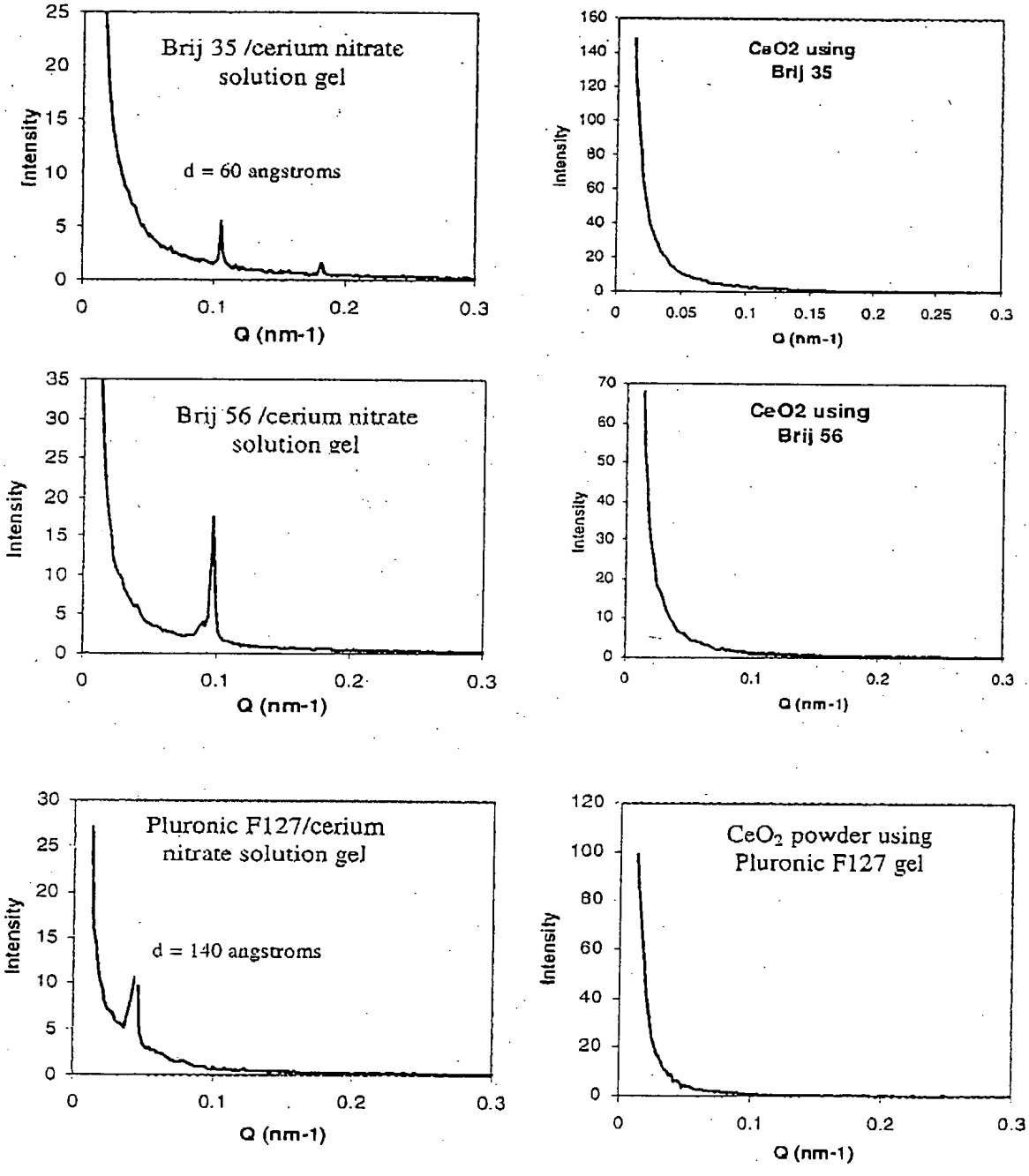
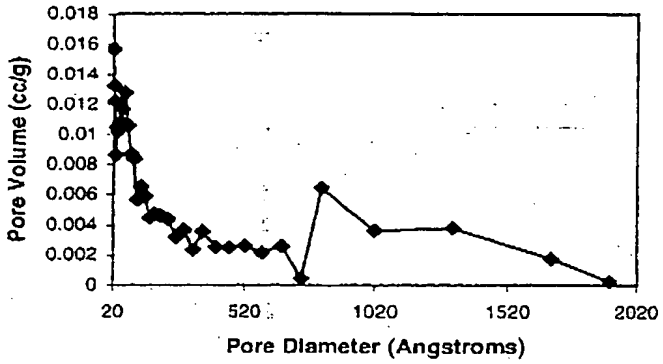


Figure 7

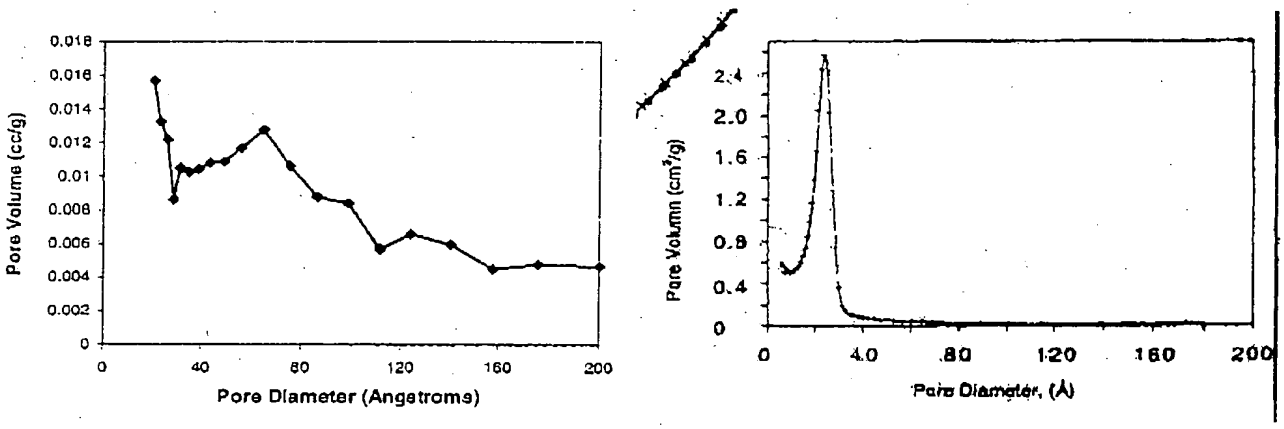
SAXS data for gels comprised of cerium nitrate solutions and Brij 35, Brij 56 and Pluronic F127 surfactants. Also shown is SAXS data from the powders produced from these gels.





Pore size distribution from CeO_2 powder made using Brij 35 surfactant (surface area = $253 m^2/g$)

Figure 8



Comparison of above data with a typical pore size distribution from a surfactant-templated material.

Figure 9

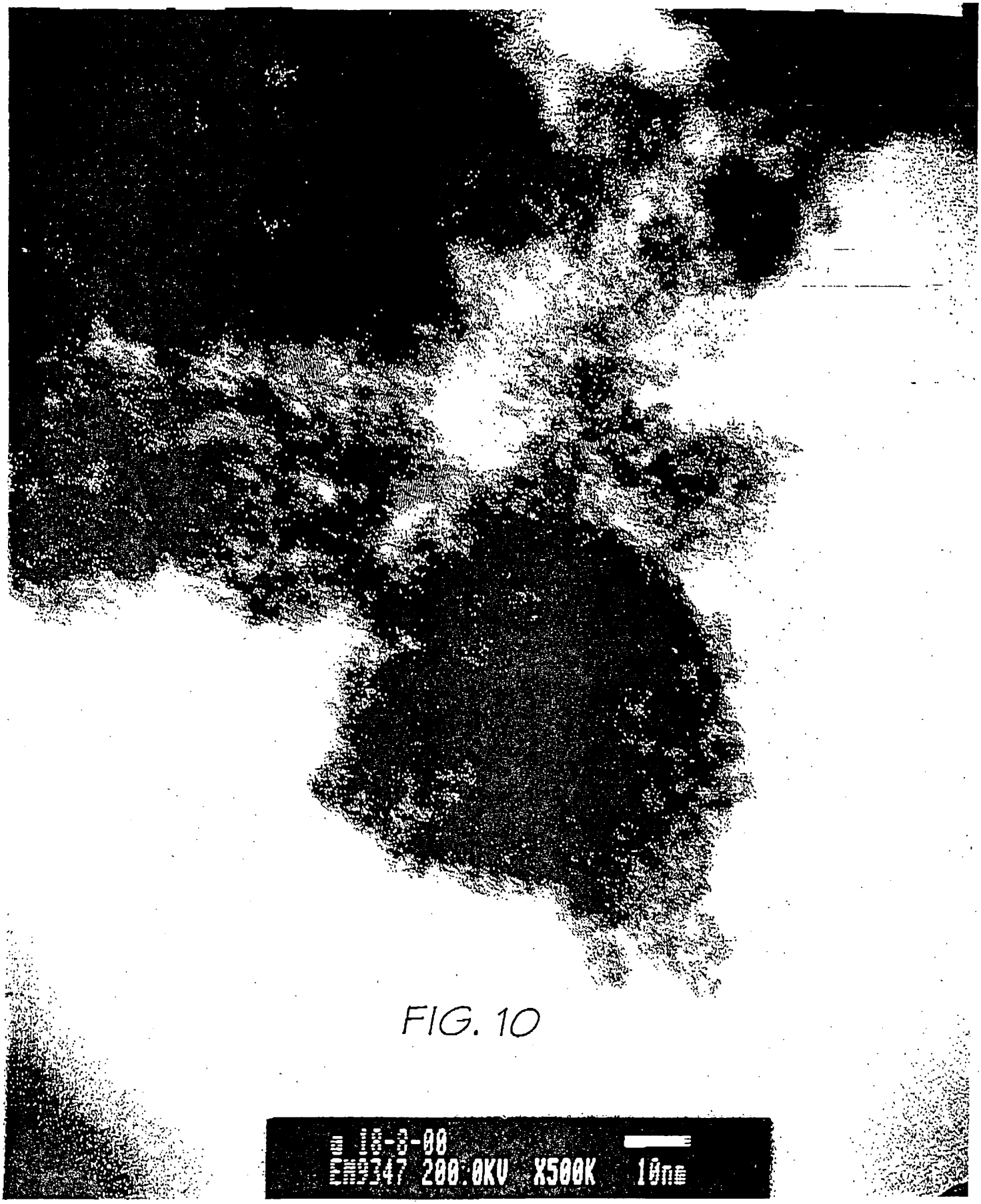
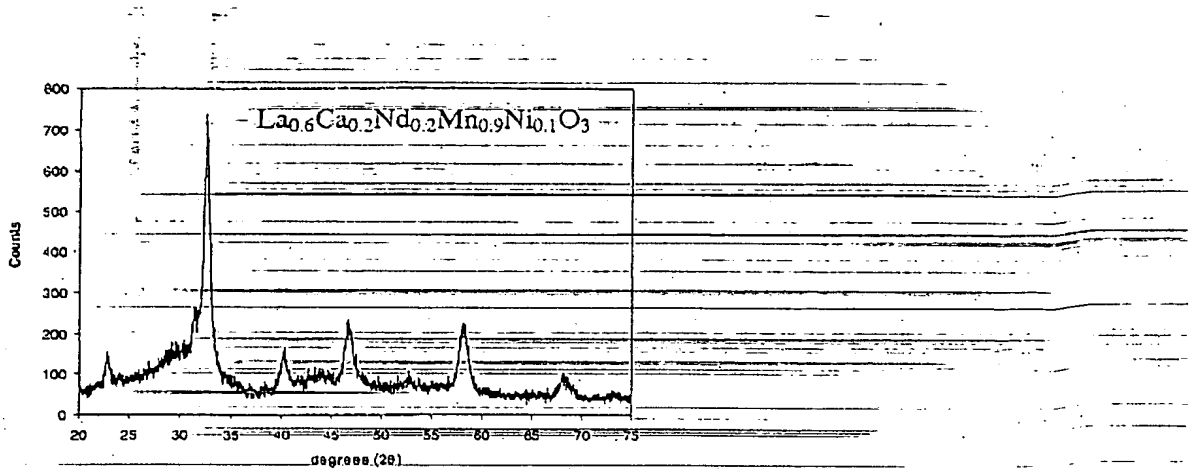
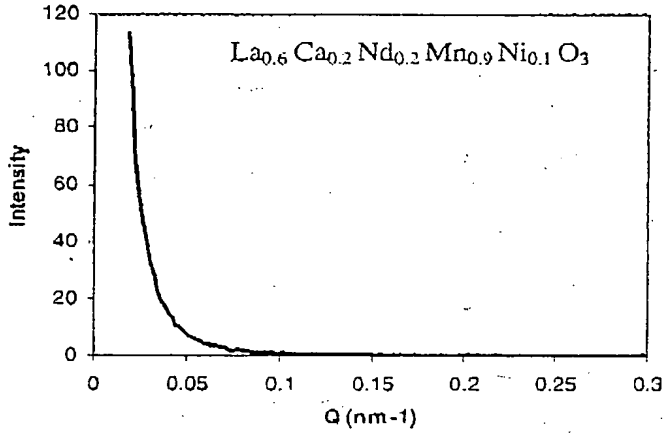


FIG. 10



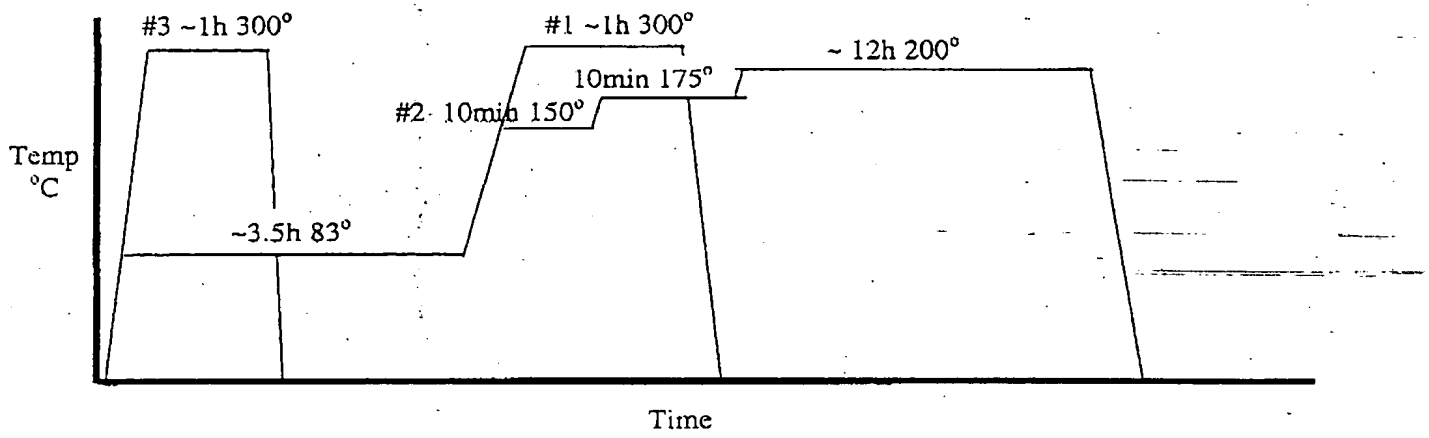
XRD trace from $La_{0.6}\,Ca_{0.2}\,Nd_{0.2}\,Mn_{0.9}\,Ni_{0.1}\,O_3$

Figure 11



SAXS data from $La_{0.6}\,Ca_{0.2}\,Nd_{0.2}\,Mn_{0.9}\,Ni_{0.1}\,O_3$

Figure 12



Heat treatment schedules for CeO_2 materials in "Experiments in Step 2: Mixing the Solution with Surfactant".

Figure 13